

REMARKS

Enclosed is a proposed drawing correction in red to Figures 2 and 3 and replacement drawings containing the correction. Essentially, Figs. 2 and 3 were reversed. This is clear from the description of the invention on page 6, lines 2-7 with respect to Figure 2 and page 6, lines 7-10 with respect to Figure 3 as well as the description in Figs. 2 and 3 of section lines A and B of Fig. 1 on page 4. Applicants regret this error. It is believed this is the source of the Examiner's objection to Fig. 1 as lacking detail. Paragraph 2 of the Office Action. If the description of Fig. 1 is read in light of corrected Figures 2 and 3, it is believed there is sufficient detail in Fig. 1 to understand the invention. Note that the essence of applicants invention is the internal liner structure of components 31, 31A, 34, 34A and 39. That is shown in detail in Figure 4. This is designed to protect the impeller cover 20 and to permit its components to be readily and individually replaced as needed. See also the attached Exhibit A.

In addition, the specification has been amended on page 5 to correctly refer to control "cage" 8, amended at page 6, line 7 to correct a typographical error and on pages 7 and 8 to clarify the labyrinthine structure. According to Applicants, the labyrinthine structure is a profile between the ceiling side liner component 39 and the first and second side liner components 34, 34A.

The function of the control cage 8 (not gauge) is well known in the art as described for example in "Blast Cleaning And Allied Process" by H. J. Plaster, Volume II, pages 12 and 13, a copy of which is enclosed as Exhibit A.

Regarding cramping member 11 (page 5, line 15), this is an arm-like member pivotally supported by a pin. The member holds the nozzle 10 against the impeller

cover by the distal end thereof being threaded with a bolt as shown in the attached Exhibit B which is a side view of the impeller of Fig. 1.

Finally, claims 1-9 have been cancelled and replaced by new claims 10-14. New claims 10-14 correspond to former claims 5-9, but amended to avoid the rejection of the claims under § 112, second paragraph and to place the claims in more conventional U.S. format.

Since the Examiner indicated that claims 5-9 contained allowable subject matter and new claims 10-14 correspond to those claims and are believed to comply with the requirements of § 112 second paragraph, it is believed these claims should now be in condition for allowance. Such action is therefore requested.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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Dated: July 12, 2004

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734734

BLAST CLEANING AND ALLIED PROCESSES

VOLUME II

H. J. Plaster

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17/19 John Adam House, Adelphi, London WC2N 6JH

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core of the wheel. The abrasive, as it fell by gravity was picked up by a small impellor that was situated centrally in the wheel. This impellor, which was designed to work completely co-ordinated with the main throwing blades, was located and fastened at the end of the drive shaft. By this means the linked relationship of the impellor and the wheel blades was maintained and the abrasive which was picked up by the impellor was passed through the control cage to the exact position on the blades.

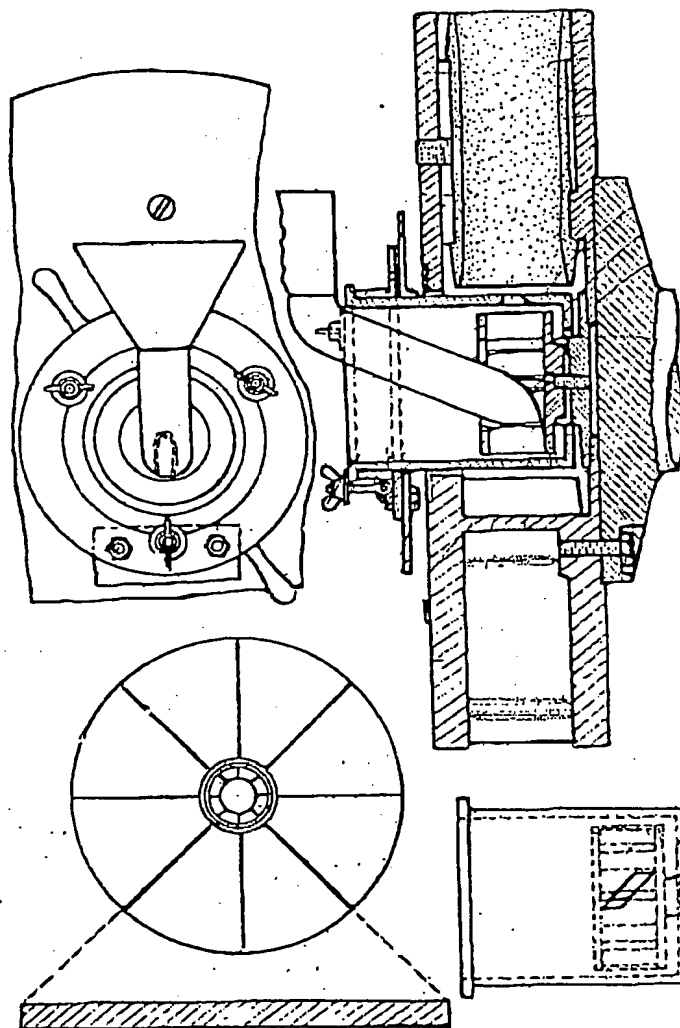


Fig. 14. The original core-fed blast wheel. Of "slider-type" action this design permitted for the first time complete directional control of the abrasive.
Courtesy of The Wheelabrator Corporation.

The control cage was designed to provide the precise directional control of the abrasive. This was achieved by the selective positioning of an aperture in the control cage. The opening may be rectangular or triangular or any other suitably desired shape. The shape itself exerted some control over the spread of the abrasive in addition to the intensity in specific areas. A further factor of considerable importance was the position of the slot in relation to the

periphery of the wheel which determined the direction at which the abrasive is discharged. Thus it was by adjusting the control cage slot that it became possible to discharge the abrasive at any desired point with considerable precision.

Since this wheel was introduced, and the basic fundamental principle of the controlled directional discharge of abrasive established, wheels of other

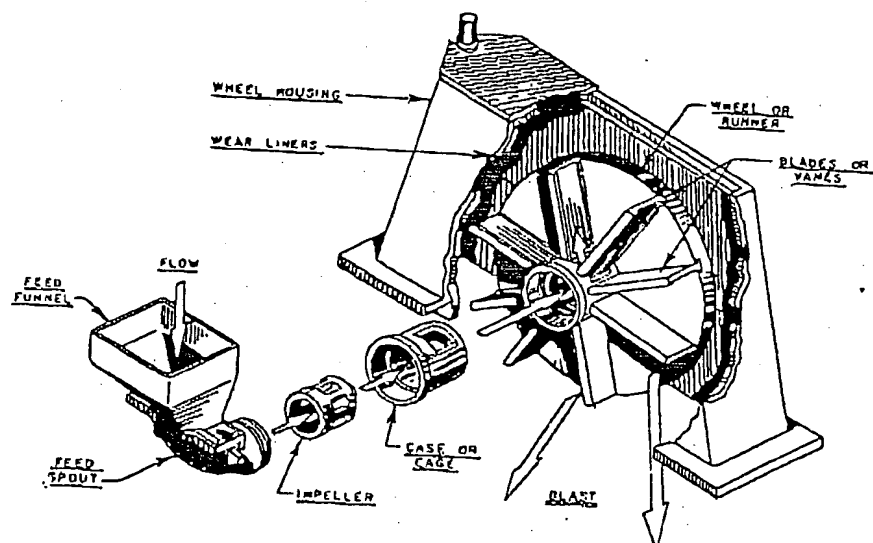


Fig. 15. The Wheelabrator Abrasive Wheel—illustrating the flow of the abrasive. One side of the wheel is not shown for reasons of clarity. Courtesy of the Wheelabrator Corporation.

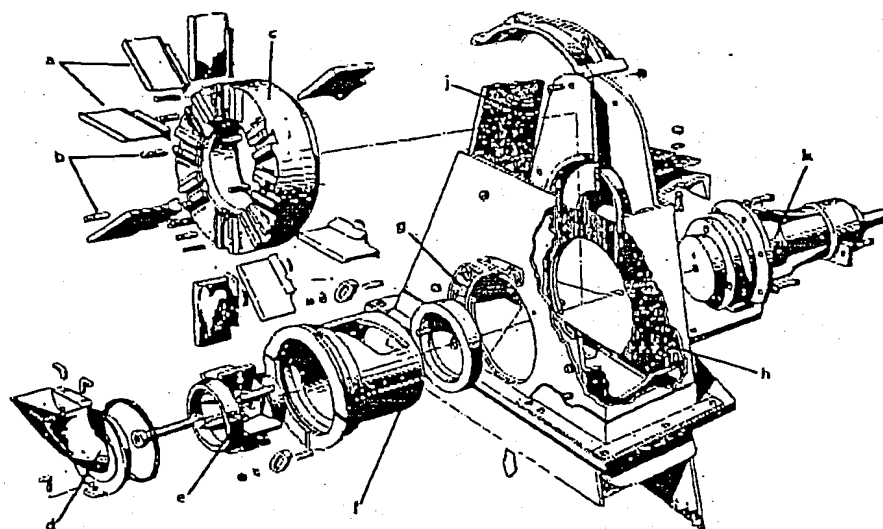
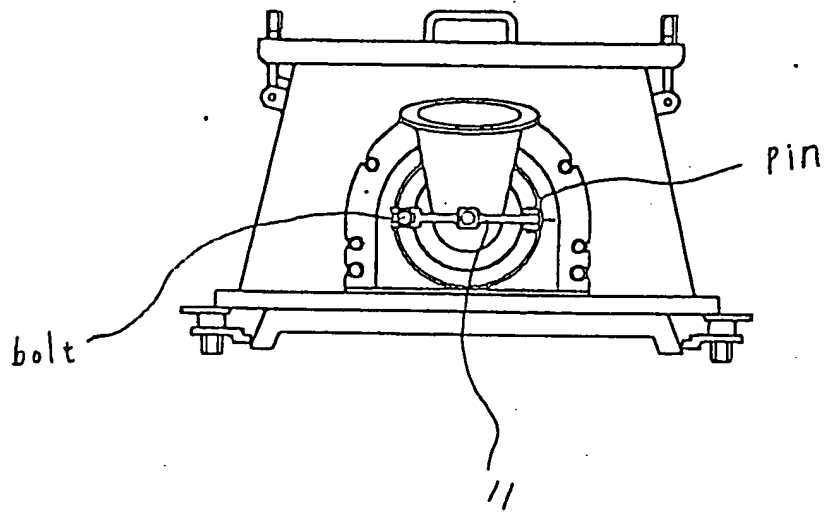


Fig. 16. The Pangborn Abrasive Throwing Wheel.

- | | |
|--------------------------|-----------------------------------|
| a. Replaceable blades | f. Control cage |
| b. Blade retaining studs | g. Control cage setting indicator |
| c. Throwing wheel | h. Wheel housing |
| d. Feed spout | j. Abrasive resisting housing |
| e. Impeller | k. Wheel shaft housing |

Courtesy of the Pangborn Corporation.



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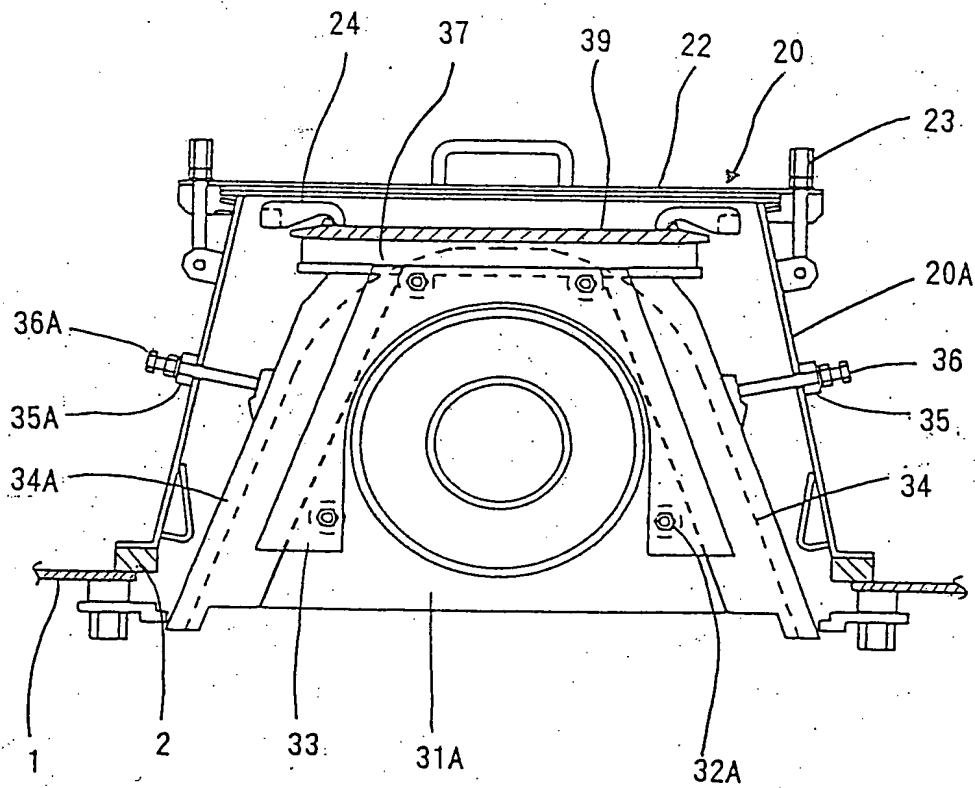


Fig. ³/₂

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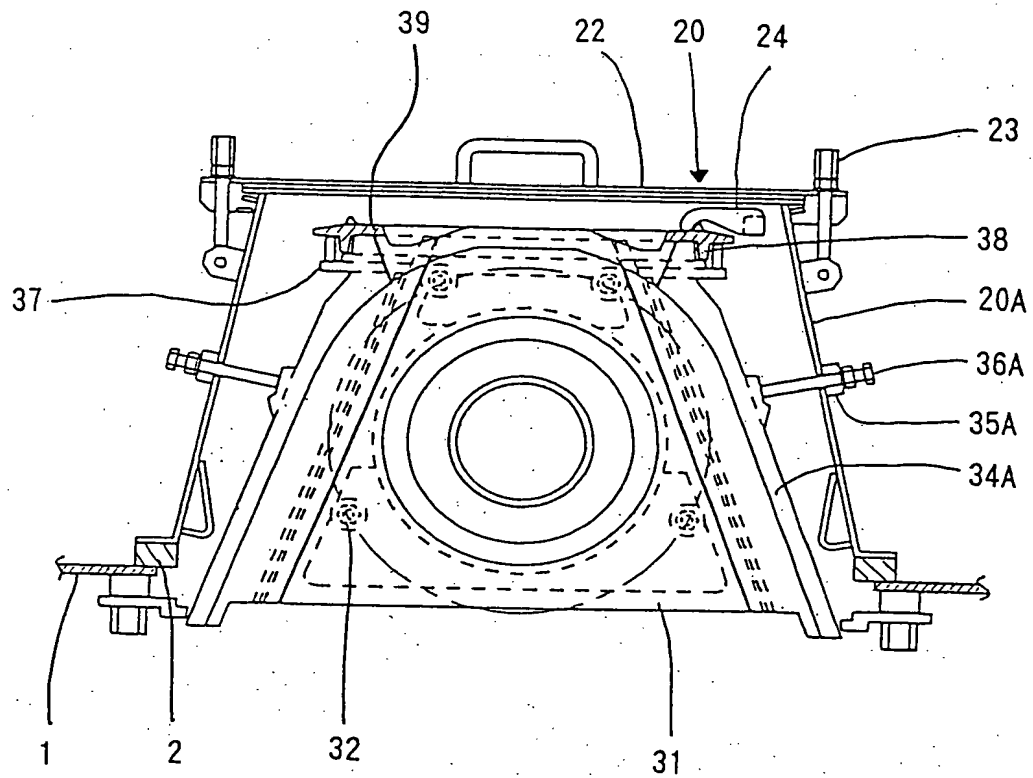


Fig. 3

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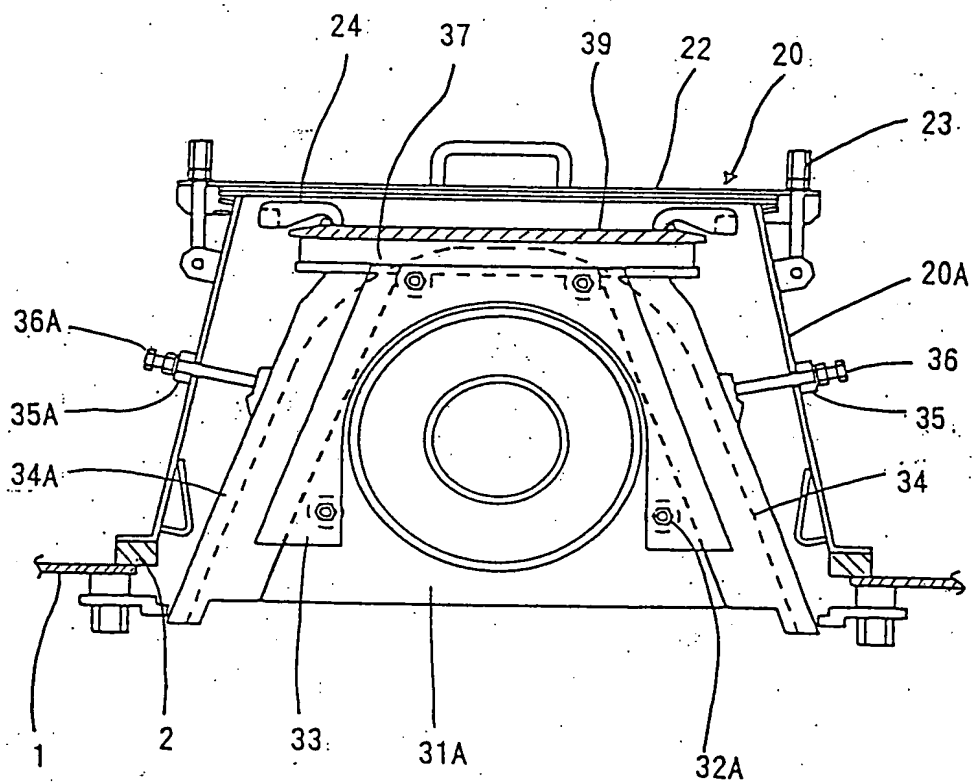


Fig. 3

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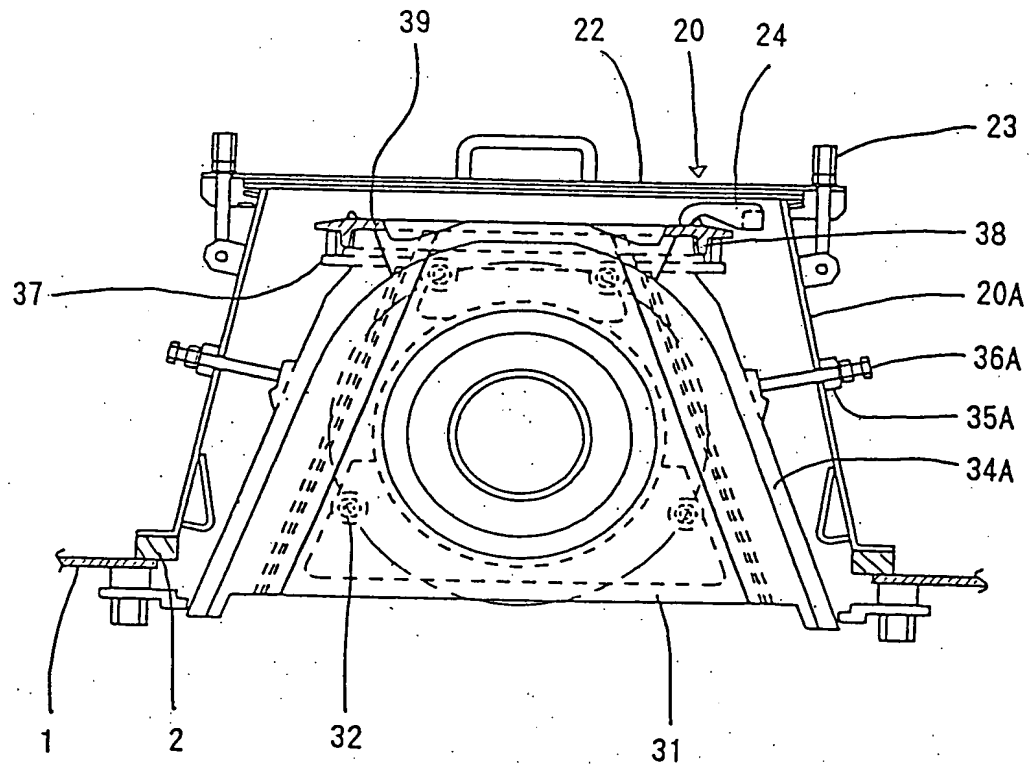


Fig. 2